DOCUMENT RESUME

ED 187 732 TM 800 227

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TITLE Prompted Feedback: A Novel Approach to Course and Instructor Evaluation.
PUB DATE [79]
NOTE 24p.: Paper presented at the Annual Meeting of the American Educational Research Association (64th, Boston, MA, April 7-11, 1980)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Course Evaluation; Feedback; Higher Education; Instructional Improvement; *Measurement Techniques; Questionnaires; Rating Scales; *Self Evaluation (Individuals); *Student Evaluation of Teacher Performance; Teacher Improvement; Teaching Skills; Test Validity
IDENTIFIERS *Prompted Feedback

ABSTRACT

A procedure is described for adding to the usefulness of students' ratings of college instructor effectiveness. This procedure begins with the students responding to a rating scale; in this instance a 25-item, 5-poing scale, but other scales might be used. Then the students are asked to write brief comments on three of those items which they rated highest and lowest, and finally to write other comments on ways to improve the course. At the same time the instructor responds to the same rating scale by indicating how relevant the items are to the course and then his self evaluation on those items. The results of a use of this procedure are discussed and the advantages are presented in comparison with other techniques that have been used for student evaluation of instructors. (CTM)

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PROMPTED FEEDBACK: A NOVEL APPROACH TO COURSE AND INSTRUCTOR EVALUATION

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I. A Novel Approach

This paper describes a novel way to gather information for course and instructor evaluation. The "approach" is called Prompted Feedback, or ProF for short.

The term approach is used here to describe the procedure for eliciting information from students and instructor and is closely related to the types of information so elicited.

In order to better understand the differences between ProF and other approaches to course and instructor evaluation surveys, let us examine some other approaches referenced in the literature.

1.1 Other approaches

Most course and instructor evaluation surveys cited in the literature use one of two approaches. The first calls for students to respond to the items of a questionnaire with a number or letter representing their opinion. The data are summarized by averaging all the responses to a given item.

A prime example of this first approach in its typical form is found in the CAFETERIA system. CAFETERIA expands on this theme by allowing instructors to partially tailor their questionnaire (Remmers, note 1). Comparability is ensured by having some core items appear on all questionnaires[1]. Variations on this approach are seen less often. In one variation, the questionnaire is designed using objective, behavioral items with the hope of having students report rather than judge the the instructors (most recently, Hayden, note 2). Feitler and Graf (note 3) in another variation ask students to rate the course numerically in comparison to other classes (where 2 means twice as good). Note that

the approach, having students respond with some number or letter to a series of items, is the same for each of these examples.

The second common approach is to have students write essays as an evaluation of the course. This approach can yield many useful and meaningful suggestions for course improvement. However, it takes a great deal of time to administer, and interpretation of the redundant and often contradictory essays is difficult. Also this method does not yield summary statistics useful in examining changes from year to year.

As an alternative approach, Vockell (note 4) proposes using a two-stage process to make the evaluation process more tailored to the individual class. In stage 1 the instructor asks the students for comments about the course, pro and con. The instructor forms these comments, along with his own, into a questionnaire which, in stage 2, is administered to the class. Students are then urged to rate each item in terms of both their agreement with it and their perception of its importance. While the results so generated are useful, the approach is unfortunately time-consuming, cumbersome, and not comparable across classes.

1.2 Prompted Feedback

Each approach above has its strengths: in the first the strength is ease of administration. in the second it is the provision for useful students' comments and suggestions. In the third, Vockell's approach, the instructor receives some measure of the importance which the students place on each item. ProF attempts to capitalize on each of these strengths.

The essence of ProF is quite simple: students respond to a questionnaire in two ways. First they indicate their degree of agreement to each item on the questionnaire using a 5-point scale. They then

write comments and suggestions for those items which they rated highest and lowest. In this way the questionnaire is used to prompt written feedback on those very items which each individual student feels the strongest.

The remainder of the paper elucidates this approach, describing its usage in practice, and reporting on a preliminary study of its validity.

1.2.1 Administration

To promote objectivity, surveys using ProF are administered by trained staff personnel. To promote standardization, the style and format of the survey administration is fully spelled out (in an administration protocol). The protocol is based on our experiences in motivating students to write useful comments.

The survey administrator first asks the class to respond to the questionnaire in the traditional way (by responding on a 5-point scale of "strongly agree" to "strongly disagree")[2].

In the second step, the students are asked to write on a separate sheet feedback (suggestions, recollection of critical instances, insights, etc.) specific to each of the following:

1) three items on which they rated the course or instructor high.
2) three items on which they rated the course or the instructor low.
3) other important aspects of the course not covered by the questionnaire.

Besides each comment for 1) and 2) above, students are asked to mark the item number (see Table A). For example, on item 13 "My instructor knows whether the class is following him or not," one student might recommend "13: I suggest that he stop every 10 minutes to check if the class understands, and not accept silence as a sign of understanding."

1.2.2 Instructor's responses

The administration involves gathering information from both the students and the instructor. While the survey is being administered to the students, the instructor is asked to leave the room. He is invited to spend this time by responding to the questionnaire in two ways. First he is asked to indicate how relevant each item is to the way he is teaching this class. For standard questionnaires, often some items are not at all relevant to the particular class situation. This information is useful later as part of the consultation, and also in validating the questionnaire itself.

Second he is asked to respond to the items of the questionnaire in terms of his own evaluation of the course and his teaching.

1.2.3 Analysis of the data

At present, the questionnaire responses and the written comments from the students are analyzed separately. The questionnaire responses are tabulated and the written feedback is sorted (all comments to each item are placed together)[3].

The computer printout of the students' responses prepared for the instructor shows the following for each item, as seen in Appendix A:

1) the number of students responding strongly agree, agree, etc.
2) the median response.
3) on a scale of 1 to 4 asterisks, the consensus of the students'opinion.
4) the instructor's evaluation of the course on these items.
5) the discrepancy between the class median and the instructor's response.

6) the instructor's reporting of the importance of this item to his way of teaching this course.

7) the number of comments students made in response to the item, showing relative importance of items to students.

Point 5, "the discrepancy between the class median and the instructor's response," is useful as Centra (1973) has shown empirically. Pointing out this discrepancy can lead to instructors improving their teaching.[4]

Point 6, "the instructor's reporting of the importance of the item to this course," is useful because it causes the instructor to give consideration to his/her teaching philosophy. Also it serves as a point of discussion during the subsequent meeting with the consultant, particularly when related to point 7.

Normative data (percentile ranks) are NOT REPORTED. We believe that it serves little purpose for teaching development to compare one instructor to others. Rather we encourage instructors to compare their relative strengths with their relative weaknesses.

The consultation process is described in more detail in Cohen (note 5).

Appendix A shows a sample report.

2.0 The Questionnaires

We have developed a catalog of twelve prepared questionnaires as well as a CAFETERIA-style catalog of items for individualized questionnaires. One of the questionnaires, GENERAL was developed to maximize the effectiveness of ProF. It is shown in Fig. A.

Many questionnaires are developed which have a number of items measuring essentially the same thing, but in different ways. For example

there may be several items designed to measure the instructor's rapport with students.

GENERAL differs from these questionnaires in that it is designed so that (for the most part) each item measures a different topic. The 25-item questionnaire measures 22 different areas so that using ProF with GENERAL the students are prompted to respond to any of 22 different areas. How GENERAL was constructed is discussed elsewhere (Cohen, note 6).

While the administration of GENERAL enhances the usefulness of ProF, ProF is not tied to the administration of any particular questionnaire.

3.0 Validity Study

Part of the appeal of ProF is that it allows for the validation of the items and questionnaire administered, and so indirectly its own validation. A preliminary study of the validation of the GENERAL questionnaire is described here as an example of the validation feature of ProF.

3.1 Results of the preliminary study

Data are available from 3,193 students in 87 classes who took part in course and instructor evaluation using ProF and the GENERAL questionnaire on this campus during the 1979 school year.

Four sets of measures and a content analysis were developed for each questionnaire item. As reported in Table B, these are the mean and standard deviation of the 87 class means, the item commonality, the proportion of students who responded to the item with a comment, and a list of representable comments. This list was obtained by instructing the person trained and experienced in comment summarization to produce 3-5 phrases which summarize the most frequent comments.

Analysis of the four sets of scores is made on a rational, non-statistical basis. Items with extremely high means can not discriminate fully the individual's relative strengths and weaknesses, thus items with a mean balanced from either extreme are preferred. Similarly, the standard deviation should be as large as possible. Hence a preferred item is one on which there is relatively large variability.

A factor analysis found, in support of expectation, that the questionnaire tends to be unidimensional. The first factor of the 25 accounted for over 40% of the variance, while the second only 8%. The communalities of the items show that the three global items, #14, 23, 25 have the highest communalities. As expected the item intended to measure initial student interest (which is not a quality of instruction), item #17, with one exception, had the lowest communalities. The one exception was item #6, "my instructor gives references for more interesting points" which scored just as low as item #17.

Of great interest is the number and quality of comments which students make in response to items. For these data, the average student made 1.7 comments. This reflects an average of 7% of the students responding to any one item with a comment.[5] Any item which elicits few comments should be considered for revision. For example item #6, "My instructor gives references for more interesting points" was commented upon by only 1.3% of the students.

By examining the most frequent comments to items, we can explore to some extent the perception of the student. As seen in the last column of Table B, the most frequent comment in response to item #12, "gives presentations which are easy to outline" deals with good boardwork. Other interesting observations can be made by examining the Table.

The questionnaire can be improved by examining the content of the "additional comments" section of the questionnaire. Here comments which were not necessarily prompted by the questionnaire are written. Recurring comments should be considered for inclusion in a later revision of the questionnaire. In our sample additional recurring comments were made regarding the timing and pace of courses, and on the physical environment.

3.3 Improving the validation design

Having learned from our mistakes, we can suggest refinements which would help improve the validation design for ProF. For one, the comments and quantitative responses of each student should be collected on a single form. This would allow for more substantial correlational studies than reported here. That is, the quantitative responses to the questionnaire and the written comments should be collected on a single form and these pieces of information should be considered together.

Another useful analysis of questionnaire validity built into the approach is omitted here because we inadvertently lost the necessary data. That omitted analysis is an examination of the instructor's impression of the relevance of the items to his ways of teaching. Items which are uniformly rated irrelevant may be considered for exclusion in future development of the questionnaire.

4.0 Summary and Evaluation of the Approach

One point which has gone unstated is that it takes 15-20 minutes to administer a questionnaire using ProF. When it is used for the purpose for which it was designed, namely teaching development, this is no problem. It should be acknowledged that were an instructor to wish to use ProF solely to satisfy administrative requirements, this time could appear to be prohibitive.

All in all, ProF has five qualities which recommend it as an approach to instructor evaluation in circumstances where instructional improvement is a major goal:

1) ProF is illuminative. It provides instructors with specific suggestions for improvement.
2) ProF provides a comprehensive report of the classroom situation, especially when used with a wide range questionnaire such as GENERAL.
3) ProF contains quantitative components so that direct comparisons across time are possible.
4) ProF is broadly applicable when used with a variety of questionnaires and so overcomes some of the difficulties of evaluating instructors in special class settings such as laboratories.
5) ProF externally resembles questionnaire formats which are familiar to instructors and students and so is not viewed as novel.

Due to its success on this campus, evaluators from other campuses should consider the approach when designing their own course and instructor systems.

Footnotes

1. Critics of this approach state that often instructors select items to show their strong points so that the results may show a contradiction between the instructor selected items and the core items. Such contradictions lead some instructors to dismiss unfairly the results of their student survey.
2. We selected this approach as a first step since the students were already familiar with the response method and the instructors with its interpretation. However, since the most salient aspect of step one is the familiarization of the students with the questionnaire items, other response methods could be used.
3. Logistically, we have found that using a computer program makes summarization and typing of the comments a reasonably sized task. There are three levels of summarization used: for small classes (about 5-25 students), medium classes (about 30-100 students), and large classes (over 100 students). Obviously more summarization is needed for the larger classes.
4. Social psychologists have developed several theories to explain this phenomenon. See Brown (1965) for an interesting exposition of the theories.
5. The average is low because we include in the total number of students many (no exact number is available) who declined to write comments.

Reference Notes

1. REMMERS, H. H. and D. N. Elliot. The Purdue rating scale for instruction. West Lafayette, IN., Purdue Research Foundation, 1950.

2. HAYDEN, J. O. Teacher evaluation: A very different approach. Teaching Resources Center, Monograph #8, University of California, Davis, 1979.

3. FEITLER, F. C. and S. A. Graf. The use of ratio production scales to assess quality of teaching performance. Paper presented at the American Educational Research Association Convention, Toronto, 1978.

4. VOCKELL, E. Purdue University, Calumet Campus. Personal communication.

5. COHEN, E. A report on course and instructor evaluation activities at the University of California, Davis, 1979.

6. COHEN, E. and K. M. Fisher. General purpose evaluation instrument for teaching improvement. Teaching Resources Center, University of California, Davis.

References

CENTRA, J. A. Self-ratings of college teaching: A comparison with student ratings. Journal of Educational Measurement, 1973, 10, 287-295.

TABLE B

Analysis of the GENERAL Form:
Various Summary Statistics

No.	Cat. No.	Description	Shape Mean	Shape S.D.	Communality	Importance % response	Most frequent comments given examples
1	2	explain difficult material clearly	2.5	1.07	.64	11.8	pace, repetition, boardwork
2	5	ask questions	2.6	.96	.49	1.2	answer with another question, ask questions
3	9	encourage questions	2.0	.88	.36	7.8	repeat before answering, no intimidation; answer now-not cut student off
4	12	outline presentations	2.4	1.20	.51	11.2	main points on board; write clearly
5	21	enjoys teaching	1.8	.80	.50	5.9	comfortable; enthusiastic available, helpful
6	23	references	2.5	.95	.19	1.3	
7	24	effective style	2.6	1.16	.68	4.5	potpourri
8	34	well-prepared	2.0	.99	.58	18.7	handouts, examples, graphs, slides punctuality, outline on board
9	37	dynamic/energetic	2.1	.95	.46	5.0	
10	42	actively helpful	2.1	.92	.39	8.2	available, patient review
11	50	motivates	2.9	1.08	.59	9.2	enthusiasm, encouragement constructive criticism
12	58	pleasing personality	2.0	.85	.46	9.5	humor; smile; cheerful calm, relaxed, patient
13	62	knows understanding	2.7	.99	.53	7.0	speed of presentation repeat material
14	65	good teacher, overall	2.3	1.07	.77	7.4	helpful, available, well-prepared
15	71	assignments interesting; stimulating	2.5	1.04	.39	11.2	not tedious, too long

16	76	relevance of course	2.1	.98	.45	5.9	practical
17	81	before taking course	2.1	.96	.20	4.6	
18	84	free to ask questions	2.1	.89	.26	4.6	class too large atmosphere-responsive
19	86	amount of work	2.2	.96	.34	4.6	
20	88	depth	2.5	1.02	.36	6.5	instructor assumes student knowledge
21	95	media	2.7	1.01	.32	4.0	use more
22	98	grades fair	2.4	.87	.29	5.1	
23	104	learn great deal	2.5	1.11	.71	4.5	practical, no time wasted repetitive of other classes
24	113	teaching methods	2.6	1.02	.62	5.6	no single
25	202	good course	2.3	1.09	.79	4.5	

TRC GENERAL COURSE AND INSTRUCTOR
SURVEY FORM
TABLE A

TRC

On your bubble card, please answer the demographic questions first, then proceed with the following questions. Please mark 'SA' if you strongly agree, 'A' if you agree, 'U' if you are undecided, 'D' if you disagree, 'SD' if you strongly disagree.

1. My instructor explains difficult material clearly.
2. My instructor asks questions skillfully.
3. My instructor encourages questioning from students.
4. My instructor gives presentations that are easy to outline.
5. My instructor seems to enjoy teaching.
6. My instructor gives references for more interesting points.
7. My instructor has an effective style of presentation.
8. My instructor seems well-prepared for class.
9. My instructor is a dynamic and energetic person.
10. My instructor is actively helpful when students have problems.
11. My instructor motivates me to do my best work.
12. My instructor has a pleasing personality.
13. My instructor knows whether the class is understanding him/her or not.
14. My instructor is a good teacher, overall.
15. Course assignments are interesting and stimulating.
16. The content of this course is relevant to my needs.
17. Before taking this course, I was interested in the subject matter.
18. I feel free to ask questions in class.
19. The amount of work expected for this course is reasonable.
20. The course covers topics in reasonable depth.
21. This course uses media (text, films, etc.) wisely.
22. Grades are assigned fairly and impartially.
23. I learn a great deal in this course.
24. Teaching methods used in this course are well chosen.
25. This is a good course.

Please complete the second sheet

COMMENTS, PLEASE!

From your responses to the items on the reverse side, please elaborate (give suggestions, comments, insights, recollections of critical instances) on 3 items you rated the highest and 3 items you rated the lowest. Please refer to items by number.

Also, additional comments would be appreciated on areas of instruction not covered by this questionnaire. Thank you.

HIGHEST RATED ITEMS (strengths of the class)

Item #	
Item #	
Item #	

LOWEST RATED ITEMS (most room for improvement)

Item #	
Item #	
Item #	

ADDITIONAL SUGGESTIONS FOR IMPROVING COURSE.

APPENDIX A

INSTRUCTOR REPORT
(Partial)

Question No.	SA (5)	A (4)	U (3)	D (2)	SD (1)	NR	MEDIAN	DISP	ESTIMATE S	E	DIFF	CMMNT POS	NEG
1	12	16	6	1	0	0	4.2	**	5	4	+ **	8	1
2	6	21	7	1	0	0	4.0	**	4	4	+	2	1
3	4	24	3	2	1	1	4.0	**	4	3	- **	3	3
4	8	18	6	2	0	1	4.0	**	4	4		4	2
5	12	18	5	0	0	0	4.2	**	4	5	+ **	7	0
6	11	16	6	1	0	1	4.1	**	3	2	- ****	5	1
7	10	18	6	0	0	1	4.1	**	5	4	-	7	0
8	25	9	0	0	0	1	4.8	*	4	4	- **	14	0
9	10	13	6	5	0	1	4.0	***	3	4	+	3	3
10	6	18	7	2	0	2	3.9	**	4	4	+	2	1
11	4	13	11	5	1	1	3.5	**	3	2	- ***	1	3
12	4	17	9	4	1	0	3.7	**	3	4	+	0	4
13	3	11	16	4	1	0	3.3	**	5	3	-	0	8
14	13	19	3	0	0	0	4.3	**	4	4	-	4	0
15	2	6	15	9	3	0	2.9	**	4	4	+ **	0	7
16	8	19	8	0	0	0	4.0	**	4	3	- **	1	1
17	10	19	2	1	1	2	4.2	**	4	3	- **	2	1
18	7	14	9	4	1	0	3.8	***	4	3	- *	2	5
19	3	22	3	5	1	1	3.9	**	4	4	+	2	4
20	8	20	3	2	1	1	4.1	**	4	4	-	0	2
21	3	13	14	4	1	0	3.4	**	2	1	- ****	1	4
22	21	12	1	0	0	1	4.7	**	4	4	- *	7	0
23	5	24	5	1	0	0	4.0	**	4	4	+	0	0
24	8	16	7	2	0	2	4.0	**	4	4	+	2	0
25	6	21	0	5	0	3	4.0	**	5	5	+ **	1	0

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TEACHING RESOURCES CENTER STUDENT FEEDBACK SERVICE

STUDENT COMMENT LISTING FOR SURVEY REPORT # 42
INSTRUCTOR: SAM PELL EXAMPLE COURSE: BUSINESS 101 (SEC. # 1)
2/30/80 17 WELMAN 8:00 AM

****

1. MY INSTRUCTOR EXPLAINS DIFFICULT MATERIAL CLEARLY.

+ He explains material very clearly by putting the material in our own terms. He knows what is difficult to grasp and explains thoroughly. (2)

Before diving into subject matter, he tells us in a step-by-step overall vie what he will explian. (2) Giving us a brief overview allows me to remember the general concepts and reason for studying certain models.

His emphasis on the components going into the theories and the logic behind them helps me understand difficult topics easily.

Uses graphs and explains the logic and reasons for the material. He doesn't just make statements. Applies current relevant events to the material.

He uses graphs, derivations, and intuitive explanations to present the difficult material. He covers the most difficult parts a couple of times and always trys to present it clearly and simply.

He explains material differently than the text; this helps a great deal.

- Sometimes has trouble explaining points that make the "big" picture clearer.

2. MY INSTRUCTOR ASKS QUESTIONS SKILLFULLY.

+ He makes us think of answers. His questions are geared to make us think carefully. This does help me learn.

The instructor asks questions that really make you think and that are completely relevant to everyday life and the world.

- Questions to the class tended to get little response. Might be better to call on individual students.

3. MY INSTRUCTOR ENCOURAGES QUESTIONING FROM STUDENTS.

+ He always stops the class and asks if there are any questions to try to stimulate some discussion.

He is always open for questions if we don't understand the material or we do and we want more information.

Motivates questions and is always willing to listen and try to answer them.

- He could encourage more participation and questions in class. He sets a kind of powerful atmosphere which one doesn't want to penetrate.

He discourages questions by expecting the student to know all about the

topic and puts the student in an embarassing position when confused.

Sometimes discourages questioning through sarcasm at remarks.

4. MY INSTRUCTOR GIVES PRESENTATIONS THAT ARE EASY TO OUTLINE.

+ Material follows a logical progression with well divided subtitles. (2)

His lectures follow right along with book.

Lectures are planned extremely well and he does a terrific job of integrating past and future material.

- Most individual lectures can be understood, but I have a great deal of trouble understanding exactly what he is getting on and how the last lecture relates to the present and future ones.

Sometimes it is difficult to outline the presentation because he does not summarize each section slow enough before moving on to the next topic. If a mistake has been made in note-taking, there is no chance to catch and correct it.

5. MY INSTRUCTOR SEEMS TO ENJOY TEACHING.

+ He seems to really like teaching this class. He is in full command of the material and has achieved an exquisite expertise in conveying this knowledge of the material. His enthusiasm is what makes the class most interesting.

The out of class contact I've had with him is really what makes me think he enjoys teaching. Because he is not so far removed from our level of learnin he is more sensitive to our needs and he just seems to like to help. Is enthusiastic.

Always enthusiastic which helps to keep me awake in class. (2) I especially like his sense of humor.

He seems very enthusiastic and seems very much into the material, which in some part transfers to the students. (2)

His enthusiasm reflects in his lectures. He really enjoys teaching and make a dreadful 8:00 class very interesting. Definitely an outstanding teacher.

****

ADDITIONAL SUGGESTIONS

Instructor should promote better student communication. Attempt to relieve fear of instructor and material.

More midterms, probably 3 or 4 would improve learning the many concepts.

Change main text.

He is a goood basic average instructor. I don't feel there is anything outstandingly good or outstandingly bad about him.

Perhaps the amount of material covered could be shortened so the depth of study could remain the same, but be understood by the students. Perhaps going over some homework problems (pertinent ones) in class would help.

This course is the hardest I've ever taken. The teacher is good, but the material is covered too fast and the reading assignments are sometimes too long (in a boring book). I hope to get a C so I don't have to repeat this.

Puts on 'tough-guy' image--seems to discourage naive questions, even if they are the most intelligent thing the student can formulate to say. Also comes across as his time being very valuable--too valuable to spend much outside time on student problems.

A planned review session, one day a week, would be helpful for many students. This would give those of us who have questions a more open atmosphere to ask them. Also, instead of us all coming in singly and each taking half hour it could be done together. Keep in mind that this is new material for us.

Get rid of that text.

Most outstanding is the excellent preparation and enthusiasm for subject matter. Always seems to know subject well.

Additional handouts explaining difficult material would be good. Like to see alot of examples worked out on handouts.

Enjoyable and informative course, but possibly could improve the minor points of relating material sections. I sometimes had to really search to find the inter-relationships, while completely understanding graphs and eq's.....

Just not so much work. This is overall a good and interesting course, but when you're rushed and swamped all the time, you lose your drive to even try.

********** END REPORT # 42 *****